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22BTU102N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2025
(First Semester)

Branch - **BIOTECHNOLOGY**

ENZYMOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	A classification of enzymes which is systematic has been developed by i) International enzyme center ii) International Enzyme commission iii)Inter Enzyme coordinator iv)International Enzyme company	K1	CO1
	2	Which allows the enzyme to combine with its substrate i) Cofactor ii) Metal ion iii) Coenzyme iv) None	K2	CO1
2	3	Which among the following catalyse the reaction by accepting a proton i) acid ii) enzyme iii)entrapment iv)Base	K1	CO2
	4	Who proposed Induced fit model? i) James Watson ii) Emil Fisher iii) Daniel E Koshland iv)Daniel Fisher	K2	CO2
3	5	Which of the following does not affect the activity of simple enzyme i) temperature ii) presence of coenzyme iii) pH iv)substrate concentration	K1	CO3
	6	SI unit of enzyme activity is i) mol ii) m/s iii) katal iv) Newton	K2	CO3
4	7	Substances which reduce the rate of enzyme catalysed reaction are known as i) substrates ii) enzymes iii) products iv) inhibitors	K1	CO4
	8	Which among the enzyme is the multienzyme complex i) Pyruvate Dehydrogenase ii) kinase iii) lipase iv) lactase	K2	CO4
5	9	Which of the following is not a method of Immobilisation. i) Entrapment ii) Ionic bonding iii) Adsorption iv) Encapsulation	K1	CO5
	10	Starch are degraded by i) amylase ii) protease iii) kinase iv) lipase	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the structure and function of NAD.	K1	CO1
		(OR)		
	11.b.	Prove the ES complex by Lock and key model.		
2	12.a.	Ilustrate the acid base mechanism of enzyme catalysis.	K2	CO2
		(OR)		
	12.b.	Discuss the cleaving mechanism of carboxypeptidase A.		
3	13.a.	State the Enzyme kinetics by Lineweaver Burk plot.	K3	CO3
		(OR)		
	13.b.	What are the factors that affect the enzyme kinetics.		
4	14.a.	Prove the competitive Inhibition with example.	K4	CO4
		(OR)		
	14.b.	Enumerate the Reversible inhibition.		
5	15.a.	Exemplify the the technique of enzyme engineering.	K4	CO5
		(OR)		
	15.b.	Write notes on Therapeutic enzymes.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Briefly give the nomenclature and classification of enzymes.	K2	CO1
2	17	Elaborate the mechanism of Lysozyme.	K2	CO2
3	18	Explain the enzyme catalysed reactions by Michaelis Menten equation.	K3	CO3
4	19	List the different types of enzyme inhibition.	K3	CO4
5	20	State the different methods of immobilization.	K4	CO5

Z-Z-Z END